




OPEN MEETING AGENDA ITEM

ORIGINAL



0000135310

# Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

311 E. Wilcox, Sierra Vista AZ 85635

March 20, 2012

Arizona Corporation Commission  
Attn: Docket Control  
1200 W. Washington Street  
Phoenix, AZ, 85007

AZ CORP COMMISSION  
DOCKET CONTROL

2012 MAR 21 P 12:49

RECEIVED

Re: Docket E-01575A-08-00328, Decision 71274

To Whom It May Concern,

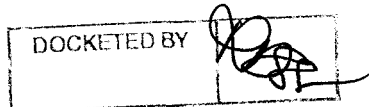
Attached is the annual report for SSVEC's Demand Side Management Program in compliance with Docket E-05175A-08-00328, Decision 71274.

All correspondence concerning this filing should be sent to:

David Bane  
Sulphur Springs Valley Electric Cooperative, Inc.  
311 E. Wilcox  
Sierra Vista, AZ 85635  
520-515-3472  
[dbane@ssvec.com](mailto:dbane@ssvec.com)

Arizona Corporation Commission  
**DOCKETED**

MAR 21 2012



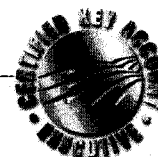
With a copy to:

Jack Blair  
Sulphur Springs Valley Electric Cooperative, Inc.  
311 E. Wilcox  
Sierra Vista, AZ 85635  
520-515-3470  
[jblair@ssvec.com](mailto:jblair@ssvec.com)

Respectfully,

David Bane  
Key Account Manager

cc: Carmel Hood, Compliance Division



**2011 Annual Expense Report  
on  
Demand-Side Management Programs  
for**

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2012 MAR 21 P 12:49

AZ CORP COMMISSION  
DOCKET CONTROL



**Sulphur Springs Valley  
Electric Cooperative, Inc.**

A Touchstone Energy® Cooperative



**For Period January 1, 2011  
through December 31, 2011  
in compliance with  
Decision #71274 of Docket E-01575A-08-00328**

**Submitted by  
Jack Blair  
Chief Member Services Officer  
Member Services Department**

**Sulphur Springs Valley Electric Cooperative  
311 E. Wilcox Drive  
Sierra Vista, AZ 85635  
PO Box 820  
Willcox, AZ 85644**

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## Program Summary

Included in the 2009 SSVEC rate case were the following Demand Side Management (DSM) Programs. The following pages show the status of the DSM Programs submitted by Sulphur Springs Valley Electric Cooperative (SSVEC) for the period January 1, 2011 and ending December 31, 2011, in compliance with Decision #71274, page 46, lines 11-21. (This replaces the DSM reporting requirement of Docket E-01575A-92-0220, Decision 58358)

Compliance Reporting Requirements as follows:

File its report on DSM PROGRAM EXPENSES semi-annually on March 1, for the period July through December, and September 1, for the period January through June. File the DSM program expense report in Docket Control and shall redact any personal customer information, and that the DSM program expense reports shall include the following: (i) the number of measures installed/homes built participation levels; (ii) copies of marketing material, (iii) estimated cost savings to participates; (iv) gas and electric savings as determined by the monitoring and evaluation process; (v) estimated environmental savings; (vi) the total amount of the program budget spent during the previous six months and, in the end of year report, during the calendar year; (vii) any significant impacts on program cost-effectiveness; (ix) descriptions of any problems and proposed solutions, including movements of funding from one program to another; and (x) any major changes, including termination of the program.

Item number (ii) for all programs is compiled into a separate section of the report beginning on page 14.

# DSM Income and Expense Statement

## 2011 DSM Budget

Touchstone EE Homes Inspections	\$ 70,000
Residential - audits	\$ 50,000
C&I - audits	\$ 4,500
DSM - Admin	\$ 25,000
DSM - Program Development	\$ 25,000
Expenses	
Advertising	\$ 80,000
Misc	\$ 5,000
Rebates	
Water Heater	\$ 25,000
Heat Pump	\$ 70,000
Loan Programs	
Residential Loans	\$ 200,000
Commercial Loans	\$ 150,000
Budget Totals	\$ 704,500

## 2011 DSM Collections

Collections from kWh sales	\$ 1,000,604
Payments from outstanding loans	\$ 85,710
Total Collected YTD	\$ 1,086,314

## DSM Expenses

Touchstone EE Homes	\$ 7,190
Residential Audits	\$ 67,589
C&I Audits	\$ 758
DSM - Admin	\$ 34,419
DSM - Program Development	\$ 27,806
Expenses	
Advertising	\$ 108,771
Misc	\$ 1,967
Rebates	
Water Heater	\$ 2,600
Heat Pump	\$ 35,500
Loan Programs	
Residential Loans	\$ 217,232
Commercial Loans	\$ 53,326
Expense Total	\$ 557,157

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DSM Program Ending Balance = \$ 529,157

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## **Energy Efficient New Home Program (Touchstone Energy Home Program)**

The Touchstone Energy Home Program replaced the Goodcents Program we were previously using until 2002. The new home program promotes new home thermal performance standards that meet or exceed HUD/AzHERS guidelines for energy efficient mortgages. This program encourages the construction of houses that are more energy efficient than otherwise would be built. Inspections on Touchstone Energy Homes are on average \$196.00 each.

	(i) Number of Homes Certified	Estimated kWh \$ saved	Estimated Fossil Fuel \$ Saved	(iii) Total Estimated \$ Savings	Estimated kWh Savings per Year	(vi) Program Costs
Jan	0	\$ -	\$ -	\$ -	-	\$ -
Feb	1	\$ 311.19	\$ 660.66	\$ 971.85	1,859	\$ 195.68
Mar	0	\$ -	\$ -	\$ -	-	\$ -
Apr	3	\$ 933.58	\$ 1,981.98	\$ 2,915.56	5,576	\$ 587.04
May	1	\$ 311.19	\$ 660.66	\$ 971.85	1,859	\$ 195.68
Jun	4	\$ 1,244.77	\$ 2,642.64	\$ 3,887.41	7,435	\$ 782.72
Jul	4	\$ 1,244.77	\$ 2,642.64	\$ 3,887.41	7,435	\$ 782.72
Aug	3	\$ 933.58	\$ 1,981.98	\$ 2,915.56	5,576	\$ 587.04
Sep	5	\$ 1,555.96	\$ 3,303.30	\$ 4,859.26	9,294	\$ 978.40
Oct	2	\$ 622.39	\$ 1,321.32	\$ 1,943.71	3,717	\$ 391.36
Nov	1	\$ 311.19	\$ 660.66	\$ 971.85	1,859	\$ 195.68
Dec	1	\$ 311.19	\$ 660.66	\$ 971.85	1,859	\$ 195.68
YTD total =	25	\$ 7,779.82	\$ 16,516.50	\$ 24,296.32	46,468	\$ 4,892

### **(v) Estimated Environmental Impact**

CO2 (1.844 lb. Per kWh)	85,686	pounds of CO2 emissions reduced
SO2 (.00342lb Per kWh)	159	pounds of SO2 emissions reduced
NOx (.0052 lb. per kWh)	242	pounds of NOx emissions reduced

### **Budget Impact**

2011 Budget	\$ 70,000.00
2011 YTD Budget	\$ 35,000.00
2011 YTD Spent	\$ 4,892.00
2011 Budget Balance	<u>\$ 30,108.00</u>

### **Program Costs (since beginning of program)**

Cost prior to 2011	\$ 63,159.83	estimated
Cost in 2011	\$ 4,892.00	

Total Program Costs = \$ 68,051.83

### **(vii) Significant impacts on program Cost Effectiveness**

None

### **(ix) Problems and Solutions:**

None

### **(x) Any major changes to the Program**

Need to adjust budget to reflect current housing market.

## **Energy Efficient Existing Home Program**

Under this program SSVEC pays \$500 per unit to a homeowner for the installation of air-to-air heat pumps with at least a SEER of 14 and \$200 for dual fuel. This program was approved for 1995 in your letter dated June 22, 1995. The following list is of rebates made during the period January 1, 2011 through December 31, 2011.

### **Heat Pump Rebate Program**

	(i) Number of Rebates	(vi) Rebates Paid	(iii) Total Estimated \$ Savings	(iv) kWh Savings per Year
Jan	15	\$ 7,200.00	\$ 1,250.47	10,275
Feb	6	\$ 2,700.00	\$ 500.19	4,110
Mar	4	\$ 2,000.00	\$ 333.46	2,740
Apr	5	\$ 2,500.00	\$ 416.82	3,425
May	5	\$ 2,500.00	\$ 416.82	3,425
Jun	4	\$ 2,000.00	\$ 333.46	2,740
Jul	6	\$ 3,000.00	\$ 500.19	4,110
Aug	6	\$ 3,000.00	\$ 500.19	4,110
Sep	7	\$ 3,500.00	\$ 583.55	4,795
Oct	5	\$ 2,500.00	\$ 416.82	3,425
Nov	3	\$ 1,500.00	\$ 250.09	2,055
Dec	5	\$ 2,500.00	\$ 416.82	3,425
YTD Totals =	71	\$ 34,900.00	\$ 5,918.88	48,635

### **(v) Estimated Environmental Impact**

(1.844 lb. Per kWh)	89,683	pounds of CO2 emissions reduced
(.00342lb Per kWh)	166	pounds of SO2 emissions reduced
(.0052 lb. per kWh)	253	pounds of NOx emissions reduced

### **(vi) Budget Impact**

2011 Budget	\$ 70,000.00
2011 YTD Budget	\$ 35,000.00
2011 YTD Spent	\$ 34,900.00
2011 Budget Balance	\$ 100.00

### **Program Costs (since beginning of program)**

Cost prior to 2011	\$ 118,900.00	Estimate
Cost in 2011	\$ 34,900.00	

Total Program Costs = \$ 153,800.00

### **(vii) Significant impacts on program Cost Effectiveness**

With the changing economy Customers are improving existing homes rather than buying new homes. This increased demand on the program.

### **(ix) Problems and Solutions:**

Funds budgeted for Touchstone Energy Home inspections were used to offset the higher demand for the Heat Pump Incentives.

### **(x) Any major changes**

Increase budget levels to match program participation.

## **Energy Efficient Water Heater Rebate Program**

SSVEC offers a \$100 cash incentive for the purchase and installation of a .90+ efficient water heater.

### **Energy Efficient Water Heater Rebate**

	(i) Number of Incentives Paid	(vi) Cost of Incentives Paid	(iii) Total Estimated Savings by Customer	(iv) Estimated kWh Savings per Year
Jan	2	\$ 200.00	\$ 240.00	1,972
Feb	3	\$ 300.00	\$ 360.00	2,958
Mar	4	\$ 400.00	\$ 480.00	3,944
Apr	3	\$ 300.00	\$ 360.00	2,958
May	0	\$ -	\$ -	-
Jun	4	\$ 400.00	\$ 480.00	3,944
Jul	1	\$ 100.00	\$ 120.00	986
Aug	2	\$ 200.00	\$ 240.00	1,972
Sep	3	\$ 300.00	\$ 360.00	2,958
Oct	4	\$ 400.00	\$ 480.00	3,944
Nov	2	\$ 200.00	\$ 240.00	1,972
Dec	2	\$ 200.00	\$ 240.00	1,972
YTD Totals =	30	\$ 3,000.00	\$ 3,600.00	29,581

#### **(v) Estimated Environmental Impact**

(1.844 lb. Per kWh)	54,547	pounds of CO2 emissions reduced
(.00342lb Per kWh)	101	pounds of SO2 emissions reduced
(.0052 lb. per kWh)	154	pounds of NOx emissions reduced

#### **(vi) Budget Impact**

2011 Budget	\$ 25,000.00
2011 YTD Budget	\$ 12,500.00
2011 YTD Spent	\$ 3,000.00
2011 Budget Balance	<u>\$ 9,500.00</u>

#### **Program Costs (since beginning of program)**

Program began in 2011	\$ 3,000.00
Cost in 2011	\$ 1,600.00
Total Program Costs =	\$ 4,600.00

#### **(vii) Significant impacts on program Cost Effectiveness**

None

#### **(ix) Problems and Solutions:**

None

#### **(x) Any major changes**

In our 2012/2013 DSM program we modified this to match the recommendations from ACC Staff setting the required EF based on tank size.

### **Residential Zero Interest Loan Program**

The Residential Zero Interest Loan Program is designed to help bring the older homes in our service area up to current thermal standards. This includes adding insulation to attics to an R-38 or higher, replacing single pane or damaged older dual pane windows, replacing hollow core exterior doors with insulated steel or fiberglass doors. If the Customer makes \$2,000 of the proceeding improvements, they could also replace 60% efficient gas furnaces with an 80% efficient gas furnace or a 14 SEER or higher Heat Pump or A/C with gas under the loan program.

**(i) Participation Levels:**

In 2011 we issued 15 loans for a total of \$213,527.17

**(ii) Marketing Materials:**

See advertising section

**(iii) Estimated Savings to Participants:**

Using the following methodology from the Manual J Load Calculation we estimated\* the savings in Gas and Electricity with these formulas.

Heating Season Requirements by building components

$$\text{Heating Season Requirement (in Btu's)} = \frac{\text{Surface Area} \times \text{Heating Degree Days} \times 24 \text{ hrs}}{\text{U-Value of Surface}}$$

$$\text{Cost of Heating} = \text{Heating Btu's} \div \text{Efficiency of Furnace} \times \text{Cost per Therm}$$

Cooling Season Requirements by building components

$$\text{Cooling Season Requirement (in Btu's)} = \frac{\text{Surface Area} \times \text{Cooling Degree Days} \times 24 \text{ hrs}}{\text{U-Value of Surface}}$$

$$\text{Cost of Cooling} = \text{Cooling Btu's} \div \text{Efficiency of A/C} \times 3125 \text{ (Btu per kWh)} \times \text{Cost per kWh}$$

\*Lifestyle and differences in perceived comfort are not included in the estimates and HDD and CDD assume a constant temperature settings.

**The following Assumptions were used:**

Heating Degree Days	2486	There are 3125 Btu's per kWh of electricity
Cooling Degree Days	2174	Old Furnace is 60% efficient
Heating hours	1261	New Furnace is 80% efficient
Cooling hours	1842	Old Windows U-Value of 1.1
Cost of Natural Gas	\$1.13776 per therm	New Windows U-Value of at least .58
Cost of Electricity	\$ 0.1217 per kWh	Old Doors R1.79
A/C Coefficient of Performance	2.5	New Doors R5 or better

Using the above formulas we estimate\* the 15 completed project will:

Btu Reduction =	415,104,735
Heating Cost Reduction =	\$ 4,050
Cooling Cost Reduction =	\$ 5,903

Improvements to the homes by sealing cracks and openings in the walls and ceilings will also lower the costs above but there is not a reliable method to calculate them other than an estimated 10-20% improvement in heating and cooling cost. Infiltration improvements are not included in the cost savings listed above.

\*Variables such as the customer's choice of set temperatures for their comfort cannot be defined.

**(iv) Gas and Electric Savings:**

Estimated Reduction in Gas Purchases =	3,559.30	therms
Estimated Reduction in kWh Purchases =	48,501.74	

**(v) Estimated Environmental Savings (electric only)**

CO2 (1.844 lb. Per kWh)	89,437	pounds of CO2 emissions reduced
SO2 (.00342lb Per kWh)	166	pounds of SO2 emissions reduced
NOx (.0052 lb. per kWh)	252	pounds of NOx emissions reduced

**(vi) Program Expenditures:**

Total amount of money Loaned:	\$217,232
Loan payments received:	\$ 85,710

**(vii) Significant impacts on program Cost Effectiveness**

None

**(ix) Problems and Solutions:**

One HVAC contractor using the program to sell HVAC equipment with minimal thermal improvements.

**(x) Any major changes to program**

To limit abuse by HVAC contractor we now limit the HVAC portion of the loan to an \$8,000 maximum.

## **C&I Energy Efficiency Zero Interest Loan Program**

The C&I Zero Interest Loan Program is unique in that it rather than promoting a single technology such as lighting (via fixture rebates) or HVAC upgrades, which we expect to be the most common upgrades, it allows for technology that might be specific to a single business sector.

To avoid announcing a new program and not having had time to collect sufficient funds from the DSM adder to fund a C&I project, the launching of the C&I Zero Interest Loan program was in June of 2010.

### **(i) Number of participants**

2

### **(ii) Copies of Marketing Material**

Marketing in 2011 was limited to verbal presentations to individual businesses by our Irrigation Manager as he presented the savings from the Cochise Groves Project. The loan program was presented to each business that had a Commercial Energy Audit as part of the report and audit.

### **(iii) Estimated Cost Savings to Participants**

Measures	(iii) Estimated Annual Savings (\$)
Replaced Lighting	\$ 5,347.44
Replaced old HVAC	\$ 3,948.00
Install 60 Hp Hitachi VFD	\$ 3,319.34

### **(iv) Gas and Electric Savings as determined by M&V process**

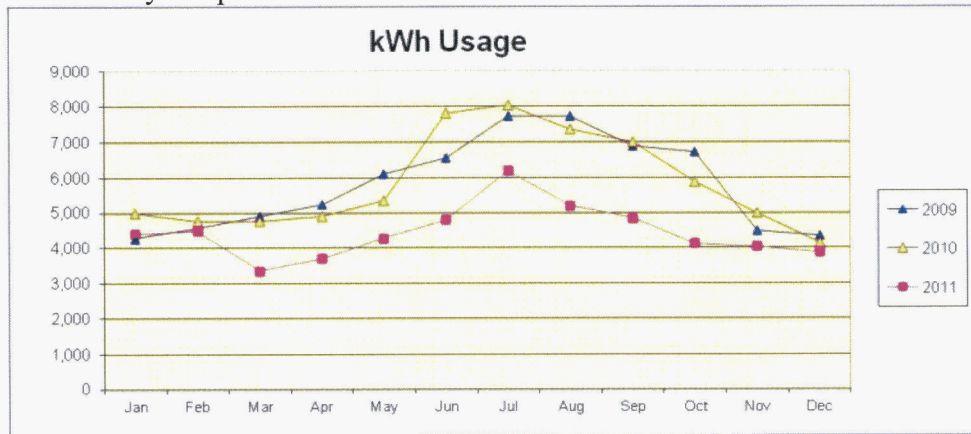
SV Chamber Electric M&V only

	kWh		
	4-year Average	2011 Actual	kWh Reduction
Jan	4,520	4,400	120
Feb	4,540	4,480	60
Mar	4,770	3,360	1,410
Apr	5,150	3,720	1,430
May	5,670	4,280	1,390
Jun	7,480	4,800	2,680
Jul	7,830	6,200	1,630
Aug	7,950	5,200	2,750
Sep	6,890	4,840	2,050
Oct	6,390	4,120	2,270
Nov	4,690	4,040	650
Dec	4,380	3,880	500
Totals	70,260	53,320	16,940

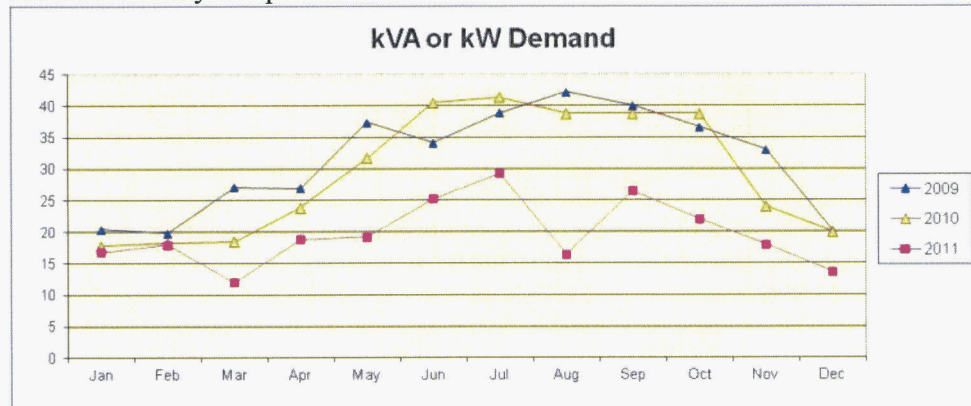
	Demand		
	4-year Average	2011 Actual	kWh Reduction
Jan	19	17	2
Feb	19	18	1
Mar	23	12	11
Apr	27	19	8
May	34	19	14
Jun	39	25	14
Jul	41	29	12
Aug	40	16	23
Sep	41	26	14
Oct	38	22	16
Nov	30	18	12
Dec	22	14	8
Totals	372	236	137

	Monthly Cost		
	4-year Average	2011 Actual	kWh Reduction
Jan	\$ 796.36	\$ 808.62	\$ (12.26)
Feb	\$ 801.57	\$ 810.28	\$ (8.71)
Mar	\$ 822.61	\$ 710.87	\$ 111.74
Apr	\$ 860.41	\$ 742.82	\$ 117.59
May	\$ 927.28	\$ 792.53	\$ 134.75
Jun	\$ 1,094.93	\$ 838.69	\$ 256.24
Jul	\$ 1,118.67	\$ 975.46	\$ 143.21
Aug	\$ 1,157.47	\$ 744.73	\$ 412.74
Sep	\$ 1,065.56	\$ 777.37	\$ 288.19
Oct	\$ 1,026.61	\$ 648.22	\$ 378.39
Nov	\$ 846.88	\$ 605.79	\$ 241.09
Dec	\$ 815.33	\$ 549.70	\$ 265.63
Totals	11,334	9,005	2,329

## SV Chamber kWh History Graph



## SV Chamber Demand History Graph



## Cochise Groves VFD project

### Cochise Groves M&V

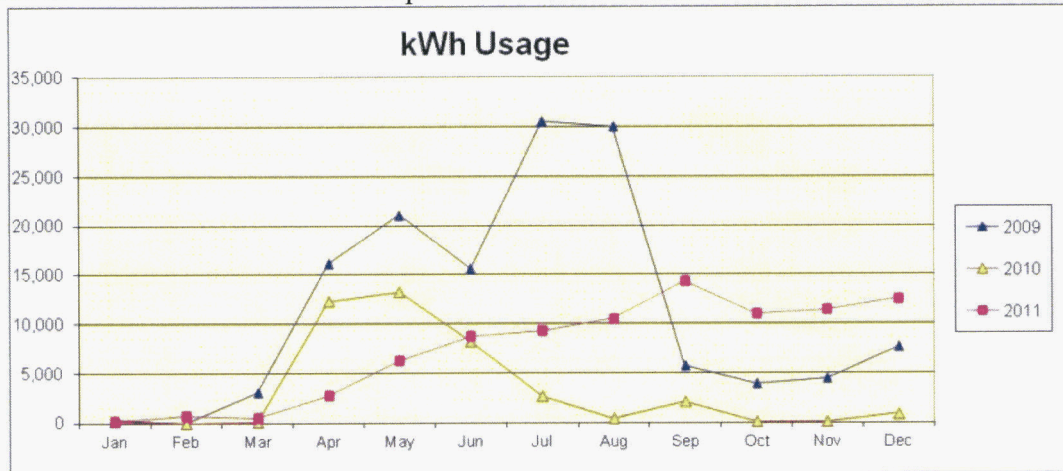
	4 year Ave	Current	kWh saved
April	15,631	2,786	12,845
May	19,949	6,330	13,619
June	20,465	8,705	11,760
July	20,403	9,315	11,088
August	19,567	10,524	9,043
September	9,006	14,324	(5,318)

Pumping Season Total = 53,036

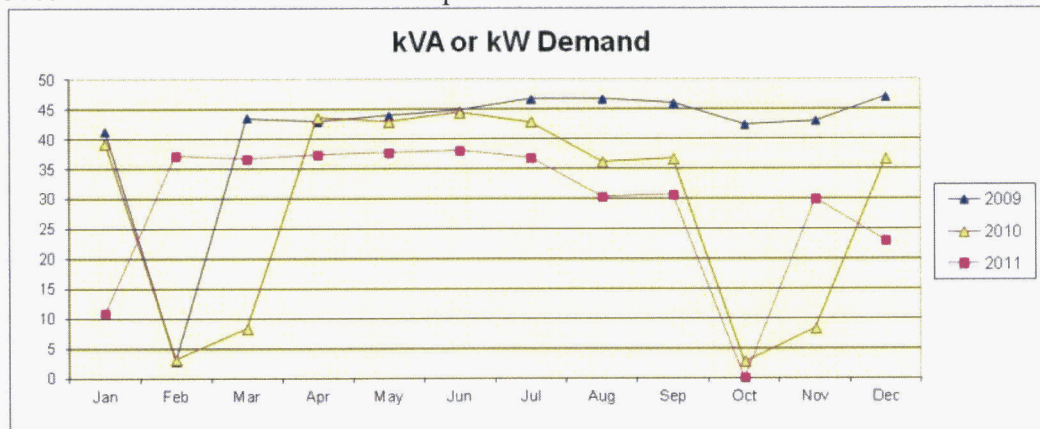
4 year history	
total kWh =	481,225
Ave per Yr =	120,306
est. 35% reduction	42,107
2011 reduction	53,036

Cost Savings \$ 4,189.80

Cochise Groves VFD kWh Reduction Graph



Cochise Groves VFD Demand Reduction Graph



**(v) Estimated Environmental Savings**

**(v) SV Chamber**

CO2 (1.844 lb. Per kWh)	31,237	pounds of CO2 emissions reduced
SO2 (.00342lb Per kWh)	58	pounds of SO2 emissions reduced
NOx (.0052 lb. per kWh)	88	pounds of NOx emissions reduced

**(v) Cochise Groves**

CO2 (1.844 lb. Per kWh)	97,797	pounds of CO2 emissions reduced
SO2 (.00342lb Per kWh)	181	pounds of SO2 emissions reduced
NOx (.0052 lb. per kWh)	276	pounds of NOx emissions reduced

**(vi) Total amount of budget spent**

\$53,325.70 in two loans

**(vii) Significant impacts on program cost effectiveness**

None at this time



**(ix) Descriptions of problems and proposed solutions**

The current state of the economy has had businesses worried about making any capital improvements, even at a zero interest level. The success of the VFD project has created interest in our irrigation community and we have eight customers getting quotes for VFDs.

**(x) Any major changes to program**

None at this time

# Advertising Report

Marketing expense and supporting data for item (ii) as outlined on page 46 of Docket No. E-01575A-08-0328, Decision No. 71274.

## Demand Side (Energy Management) articles in the SSVEC Bill Insert *Co-op Connections*

July 2011

None

August 2011

**“Rebates and Zero-Percent Interest Loans are available  
from SSVEC”**

.5 page of 2 pages @ \$4,018.53

\$1,004.63

1 hour of labor at \$28.52 per hour

\$ 28.52

September 2011

None

October 2011

None

November 2011

None

December 2011

None

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**Total for Co-op Connection**

**\$1,033.15**

# Demand Side (Energy Management) articles in the SSVEC Member Magazine *Currents*

## July 2011

"Give Your Energy Use a Vacation"	page 3	.5 page	
"Free Energy Audits Available to Cooperative Members"	page 4	1.0 page	
"Balancing Your Room Temperature"	page 25	1.0 page	
<b>2.5 pages of 32 pages at</b>			<b>\$1,709.38</b>

## September 2011

"Change Air Filter Regularly"	page 3	.5 page	
"SSVEC Offers Free Energy Audits to Members"	page 4	1.0 page	
"Low-Impact Entertainment"	page 6 & 7	2.0 pages	
<b>3.5 pages of 32 pages at \$21,746.87</b>			<b>\$2,378.57</b>

## November 2011

"Laundry: The Top 15 Ways to Save"	page 3	.5 page	
"Expert Energy Advice Offered Free by SSVEC"	page 4	1.0 page	
"Little Things Save a Lot"	page 6 & 7	2.0 pages	
"How Low Can You Set Your Thermostat?"	page 25	1.0 page	
<b>4.5 pages of 32 pages at \$22,655.15</b>			<b>\$3,185.87</b>

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<b>Total for <i>Currents</i></b>			<b>\$7,273.82</b>
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# Summary of Advertising Costs for 2011 DSM

- A. Co-Op Connection – Monthly bill insert produced by SSVEC. Information related to DSM – energy conservation/management.

Production Costs	\$ 28.52
Printing Costs	<u>\$ 1,004.63</u>
<b>Total Bill Insert Costs</b>	<b>\$ 1,033.15</b>

- B. Currents Magazine

SSVEC is responsible for developing and providing pages for the Currents publication, which is mailed to all SSVEC members.

<b>Total Currents Costs</b>	<b>\$ 7,273.82</b>
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- C. Media Advertising

Media campaign consisting of Energy Efficient Home promotion and Heat Pump.

Print Advertising	\$ 11,339.57
Radio Advertising	\$ 8,767.64
TV Advertising	<u>\$ 12,865.00</u>
<b>Total Media Advertising</b>	<b>\$ 32,972.21</b>

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<b>TOTAL FOR JULY-DECEMBER 2011 ADVERTISING</b>	<b>\$ 41,279.18</b>
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# Co-op CONNECTION

News and Information from SSVEC

August 2011

## Calendar

### August 17

**SSVEC Board of Directors Meeting**  
9:30 a.m. at the SSVEC boardroom at 311 E. Wilcox Drive in Sierra Vista, Arizona. Call to members is at 9:35 a.m.

### September 5

**SSVEC Offices Closed for Labor Day Holiday**  
To report an outage or other electrical emergencies, call 1-800-422-3275.

### September 21

**SSVEC Board of Directors Meeting**  
9:30 a.m. at the SSVEC boardroom at 350 N. Maskell Avenue in Wilcox, Arizona. Call to members is at 9:35 a.m.

### October 19

**SSVEC Board of Directors Meeting**  
9:30 a.m. at 1557 Cooperative Way in Benson, Arizona. Call to members is at 9:35 a.m.

Check out SSVEC's website at

[www.ssvvec.org](http://www.ssvvec.org)

*Energy-efficiency can be very affordable!*

## Rebates and Zero-Percent Interest Loans are available from SSVEC

Generally speaking, energy-efficiency is an investment. Buying a higher efficiency home heating/cooling system may cost a little more upfront, but you can save on your energy bill over the life of the system.

The same is true for upgrades to your home's building envelope. Installing quality doors and windows saves you money on monthly energy bills and provides comfort year round.

SSVEC has programs that can make those purchases a little more affordable!

### Rebates

SSVEC will pay homeowners a rebate of \$500

when they install a high-efficiency electric heat pump (15 SEER or greater for a package system and 16 SEER or greater for a split system). And there is a \$100 rebate if members install a water heater with a .93 or higher efficiency.



### Zero-Percent Loans

SSVEC offers zero percent interest loans to assist members who are homeowners in making energy efficiency upgrades. Loans can be used for improving the insulation of

a home, upgrading doors or windows.

Funding for the program comes from the Demand Side Management Surcharge on members' monthly electric bills approved by the Arizona Corporation Commission. Loan amounts from \$2,000 to \$20,000 can be considered. The cooperative will complete credit checks.

An individual member must own his home in order to be eligible. Work must be completed by a licensed and bonded contractor.

For more information, check the cooperative's website at [www.ssvvec.org](http://www.ssvvec.org).

## National Group Recognizes Co-op's Increased Solar Capacity

The Solar Electric Power Association (SEPA), an educational and research non-profit focused on helping utilities integrate solar into their operations, has recognized SSVEC as one of the top electric cooperatives in terms of utilization of solar power during 2010.

SEPA analyzes information for the year from 230 investor-owned, municipal and cooperative electric utilities across the nation, both in terms of total solar megawatts (MW) added to their systems and the number of watts per customer.

SSVEC was number six among the 57 electric cooperatives in the survey with an increase of 454 MW of solar power added in 2010. This translates to 454,000 watts of solar capacity.

SEPA also ranks utilities based on the increased solar use in terms of watts per customer.

SSVEC ranked number five among electric cooperatives in this past year's survey with 8,975 watts per customer.

(SSVEC was the top ranked utility for 2009 with 56 solar watts per customer.)









By comparing information on the EnergyGuide labels, consumers will be able to make more-informed decisions about which model they choose to buy, based on how much it costs to operate per year. EPA estimates that consumers will realize savings that will amount to higher up to 40% of the full EnergyGuide label, as:

**How Details - prepare energy spending to energy efficiency for the Consumer Research Award, awarded to the owner.**

© 1999 by The McGraw-Hill Companies, Inc.







There are also some cars on wheels that are so new to the world of cars, they are really new and different cars.

So if you have a car that is new to the world of cars, you can find it in the new car section. You can find it in the new car section. You can find it in the new car section.

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#### Programmable Thermostats

Beginning in 2011, a programmable thermostat became a legal requirement. The idea was to save \$1.5 billion a year with the energy savings. The idea was to save \$1.5 billion a year with the energy savings. The idea was to save \$1.5 billion a year with the energy savings.

#### Energy Efficient

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#### Water Heater Installation

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### Energy Efficient Shopping List

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## How Low Can You Set Your Thermostat?



Thermostats are designed to be set at a temperature that is comfortable for you. But if you set it too low, you will be uncomfortable.

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James D. Sullivan is a writer and editor who has written for many years. He is currently working on a book about cars.

# What tells you how to fill this socket that could put money back in your pocket?

What tells you how to fill this socket that could put money back in your pocket?

SSVEC's New Energy Audit

Maximize your savings

Sealed Air Corporation, Inc.






# He's not from the \$1,000,000 sweepstakes. But he could save you hundreds.

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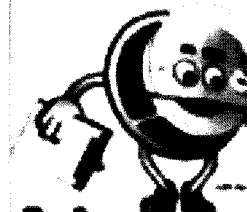
# What can help you save and save from the attic to the microwave?

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Maximize your savings

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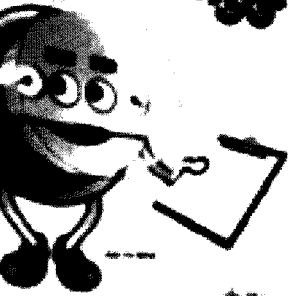
# MAXimize your savings

MAXimize your savings

SSVEC's New Energy Audit

Maximize your savings

Sealed Air Corporation, Inc.




[illegible]

Only use these tips when you're not wearing your seat belt. Remember, always wear your seat belt. It's the best way to protect yourself in a crash. And, please don't drink and drive. It's the only way to stay safe on the road.

## SSVEC's New Energy Audit

**Spring Valley  
Electric Company, Inc.**



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on "Energy" 24  
Pg 1  
new 1-800-888-8888

**Energy**

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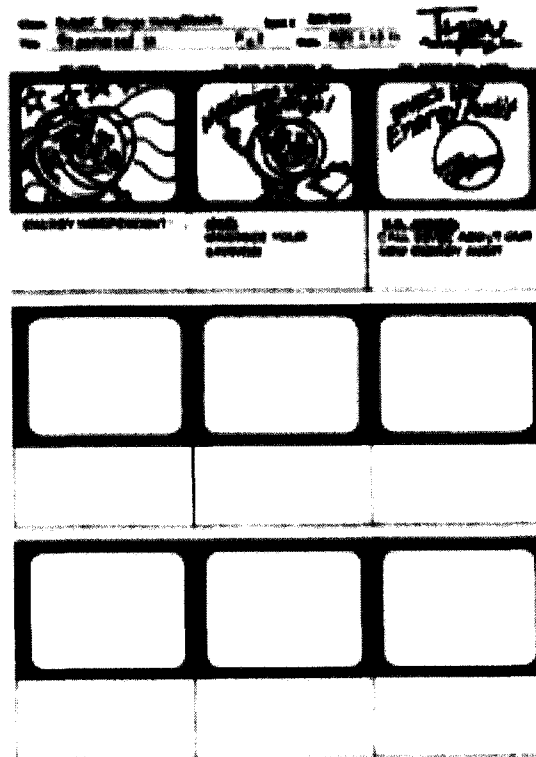
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# Home Audit Program

Although not part of our Current DSM/EEE program it was started with the approval of an ARRA Grant on Energy Efficiency. This program is part of the proposed DSM/EEE program currently under review by Staff.

## SSVEC Energy Auditing

Sulphur Springs Valley Electric Cooperative's (SSVEC) was awarded American Recovery and Reinvestment Act matching grant funds from the Department of Energy to expand and expedite in SSVEC's smart grid modernization efforts. This effort includes an Energy Audit program to educate members on energy awareness and to improve the thermal envelope of homes as well as improve a home's energy efficiency. The energy audits would direct members to existing SSVEC no/low interest energy efficient based loan programs.

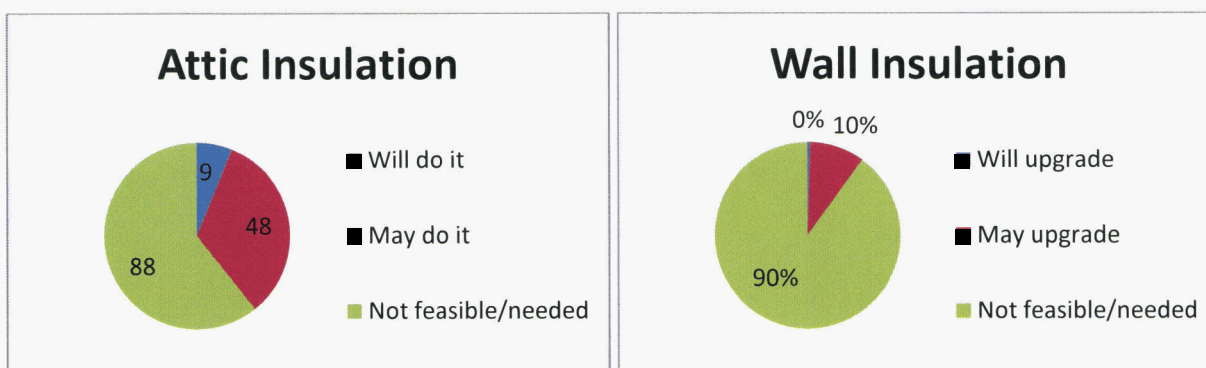
SSVEC began conducting energy audits in May 2011. These energy auditors visit a member's home upon request, conduct an in-depth analysis and make specific recommendations on what the home owner can do to decrease electric consumption. Upon completion of the energy audits, the auditors inquired how likely the members would be to implement these recommendations; Answers were limited to a) the member will implement the recommendations, b) the member may implement some or all of the recommendations or c) the member will not implement any of the recommendations as they are not feasible or needed. These auditors also promote SSVEC's DSM program and helps the member to determine which programs will provide them with the most help.

SSVEC completed 468 audits in 2011, yielding 52 recommendations which member indicated they will implement and 431 recommendations which member may implement. The auditors recommended several actionable items to enable members to lower their overall energy usage. The categories recommended to upgrade or improve were Infiltration, Windows, Doors and Insulation as well as heating and cooling appliances.

SSVEC has an energy efficiency zero interest loan program. The goal of this program is to get members to upgrade their thermal envelope as well as their heating & cooling units to more energy efficient ones.

## Insulation

Attic and wall insulation can improve the thermal envelope of a residence. The goal of SSVEC is to improve attic insulation levels to at least R-38. Some walls are initially between R-2 and R-4; the goal is to increase wall insulation levels to between R-5 and R-10. Many of the homes audited did not have attic space (339). The homes attics who indicated they will not improve their attic insulation all but five had R-values greater than or equal to R-30.

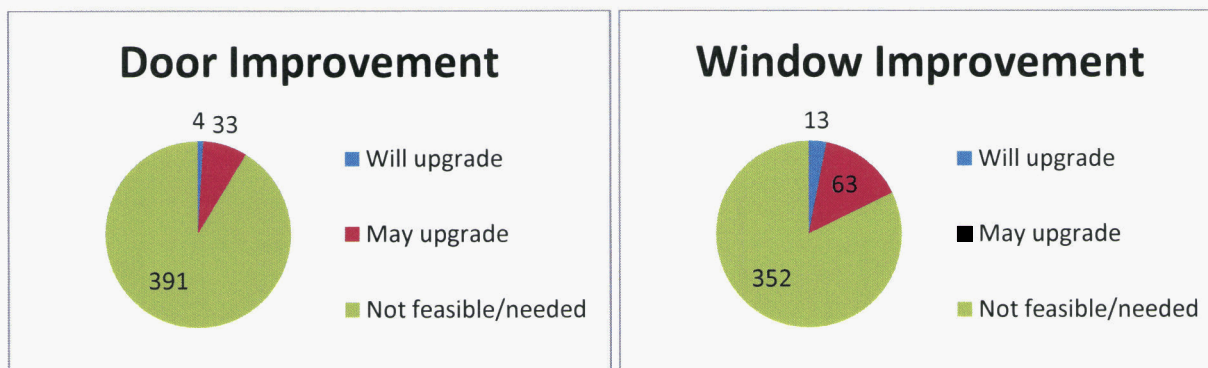


Note: Not feasible / needed means that the attic or wall meets current thermal requirements or physically cannot be upgraded to current standards.



## Windows & Doors

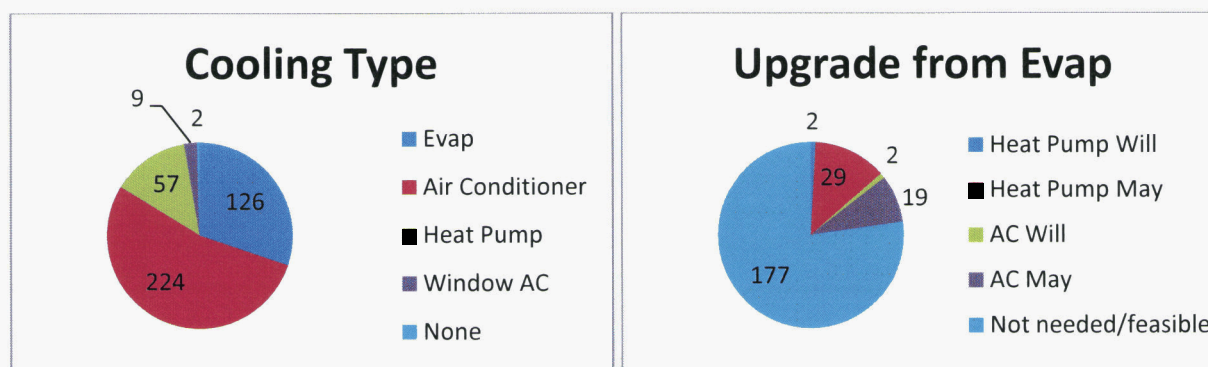
Door and window upgrades can also improve the thermal envelope of a residence. The goal of SSVEC is to replace old wooden exterior doors with insulated steel or fiberglass doors with an insulation value of R-5 or better and replace single pane window with dual pane windows with an insulation value of R-1.7 or greater (a U value of at least 0.58).



Note: Not feasible / needed means that the attic or wall meets current thermal requirements or physically cannot be upgraded to current standards.

## Heat Pumps & Air Conditioning

New heat pumps and air conditioning systems are more efficient than older heating and cooling systems. Upgrading to a newer unit can reduce the energy consumed by a member. The goal of SSVEC is to replace old heating and cooling units with ones with a minimum SEER rating of 15 (16 SEER for split system heat pumps). There are 57 members with heat pumps; only three indicated they may upgrade their heat pump and one member they will upgrade to an A/C unit. There are 224 members with air conditioners; only one indicated they may upgrade to a heat pump and one member they will upgrade their A/C unit and two more members may upgrade their A/C unit.

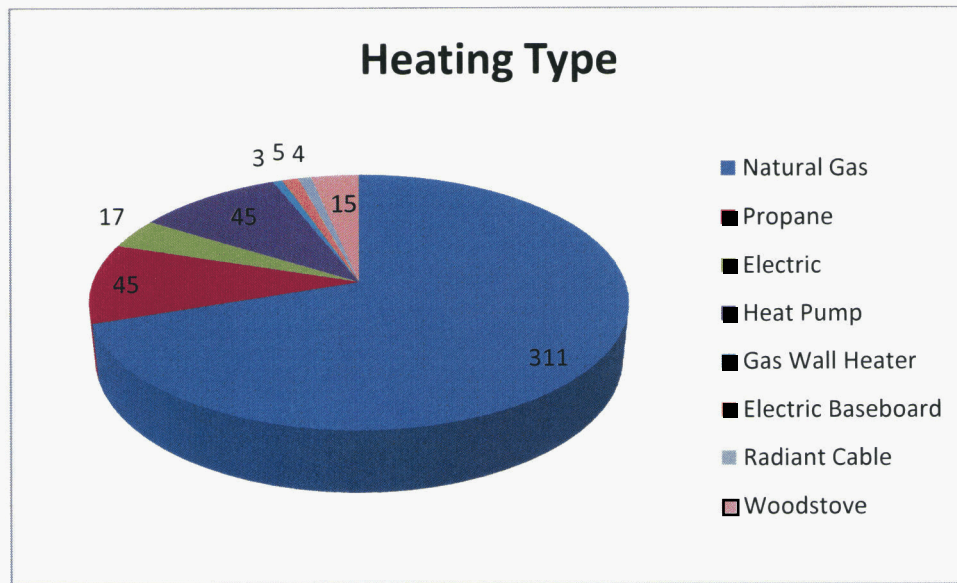


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## Heating

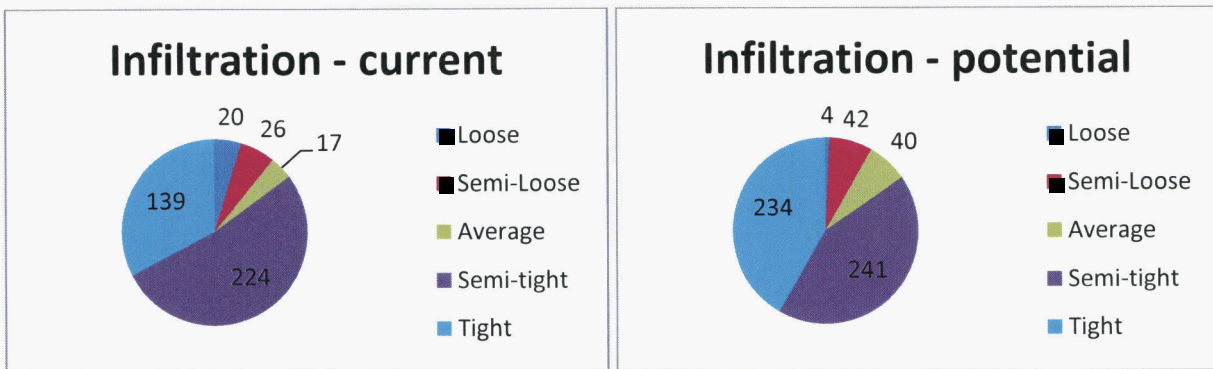
There are some SSVEC members who prefer to heat their home by gas or other means. SSVEC's energy auditors also asked members if they would consider replacing an older, less efficient furnace (typically around 60% efficient) with a newer one (greater than 80% efficient, but less than 90% efficient); one member indicated they will, 28 stated they may and 400 do not intend to upgrade.



	Qty	Will upgrade to Heat Pump	May upgrade to Heat Pump	Heat Pump Upgrade not needed or feasible	Will upgrade to Furnace	May upgrade to Furnace	Furnace Upgrade not needed or feasible
Natural Gas	311	2	18	182	1	15	290
Propane	45	1	7	22	---	4	40
Electric	17	---	9	7	---	5	11
Heat Pump	45	---	1	33	---	---	44
Gas Wall Heater	3	---	2	1	---	---	3
Baseboard Electric	5	---	3	2	---	2	3
Radiant Cable	4	1	1	1	0	1	3

## Infiltration

Infiltration is the unintentional or accidental introduction of outside air into a building, typically through cracks in the building envelope, and worn or missing weather stripping around windows and doors. This is often the least expensive, yet most cost effective, method to decrease the energy needed to cool or heat one's home. The charts below show the current infiltration level and the potential infiltration level when recommended upgrades are complete.



These charts use construction labels based upon **Air Conditioning Contractors of America**

SSVEC's energy auditors also asked members if they would consider any other energy efficiency improvements to their homes; seven members indicated they will, 106 stated they may and 270 do not intend to upgrade their homes using other energy efficient improvements.